VERSION WITH MARKINGS TO SHOW CHANGES MADE

In showing the changes, deleted material is shown as brackets, and inserted material is shown underlined.

IN THE SPECIFICATION:

Paragraph beginning at page 1, line 3:

This application is a continuation application of U.S. Application No. 09/599,416, filed June 22, 2000, which claims the benefit of U.S. Provisional Application No. 60/140,227, filed June 22, 1999, whose contents are hereby incorporated by reference.

Paragraph beginning at page 3, line 26:

In a third embodiment, this invention concerns an isolated polynucleotide comprising a nucleotide sequence of at least [one of 60] 30 (preferably at least [one of] 40, most preferably at least [one of 30] 60) contiguous nucleotides derived from a nucleotide sequence selected from the group consisting of SEQ ID NOs:1, 3, 5, 7, 9, 11, 13, 15, 17, and 19 and the complement of such nucleotide sequences.

Paragraph beginning at page 4, line 11:

In an eighth embodiment, the invention concerns a method of obtaining a nucleic acid fragment encoding a substantial portion of a scorpion K-channel agonist polypeptide, comprising the steps of: synthesizing an oligonucleotide primer comprising a nucleotide sequence of at least [one of 60] 30 (preferably at least [one of] 40, most preferably at least [one of 30] 60) contiguous nucleotides derived from a nucleotide sequence selected from the group consisting of SEQ ID NOs:1, 3, 5, 7, 9, 11, 13, 15, 17, and 19, and the complement of such nucleotide sequences; and amplifying a nucleic acid fragment (preferably a cDNA inserted in a cloning vector) using the oligonucleotide primer. The amplified nucleic acid fragment preferably will encode a substantial portion of a scorpion K-channel agonist amino acid sequence.

Paragraph beginning at page 8, line 22:

In the context of this disclosure, a number of terms shall be utilized. The terms "polynucleotide", "polynucleotide sequence", "nucleic acid sequence", and "nucleic acid fragment"/"isolated nucleic acid fragment" are used interchangeably herein. These terms encompass nucleotide sequences and the like. A polynucleotide may be a polymer of RNA or DNA that is single- or double-stranded, that optionally contains synthetic, non-natural or altered nucleotide bases. A polynucleotide in the form of a polymer of DNA may be comprised of one or more segments of cDNA, genomic DNA, synthetic DNA, or mixtures thereof. An isolated polynucleotide of the present invention may include at least [one of 60] 30, preferably at least [one of] 40, most preferably at least [one of 30] 60 contiguous nucleotides derived from SEQ ID NOs:1, 3, 5, 7, 9, 11, 13, 15, 17, and 19, or the complement of such sequences.

Paragraph beginning at Page 16, line 1:

In addition, two short segments of the instant nucleic acid fragments may be used in polymerase chain reaction protocols to amplify longer nucleic acid fragments encoding homologous genes from DNA or RNA. The polymerase chain reaction may also be performed on a library of cloned nucleic acid fragments wherein the sequence of one primer is derived from the instant nucleic acid fragments, and the sequence of the other primer takes advantage of the presence of the polyadenylic acid tracts to the 3' end of the mRNA precursor encoding arthropod genes. Alternatively, the second primer sequence may be based upon sequences derived from the cloning vector. For example, the skilled artisan can follow the RACE protocol (Frohman et al. (1988) *Proc. Natl. Acad. Sci. USA 85*:8998-9002) to generate cDNAs by using PCR to amplify copies of the region between a single point in the transcript and the 3' or 5' end. Primers oriented in the 3' and 5' directions can be designed from the instant sequences. Using commercially available 3' RACE or 5' RACE systems (BRL), specific 3' or 5' cDNA fragments can be isolated (Ohara et al. (1989) *Proc. Natl. Acad. Sci. USA 86*:5673-5677; Loh et al. (1989) *Science 243*:217-220). Products generated by the 3' and 5' RACE procedures can be combined to generate full-length cDNAs (Frohman and Martin (1989) *Techniques 1*:165). Consequently, a polynucleotide comprising a nucleotide sequence of at least [one of 60] 30 (preferably at least [one of] 40, most preferably at least [one of 30] 60) contiguous nucleotides derived from a nucleotide sequence selected from the group consisting of SEQ ID NOs:1, 3, 5, 7, 9, 11, 13, 15, 17, and 19 and the complement of such nucleotide sequences may be used in such methods to obtain a nucleic acid fragment encoding a substantial portion of an amino acid sequence of a polypeptide.

Paragraph beginning at Page 16, line 23:

The present invention relates to a method of obtaining a nucleic acid fragment encoding a substantial portion of a scorpion K-channel agonist polypeptide, preferably a substantial portion of an arthropod potassium channel blocking toxin 15-1, Bmtx toxin, neurotoxin P2, leiurotoxin I, leiuropeptide I, leiuropeptide III, kaliotoxin 1 precursor or cobatoxin 1 polypeptide, comprising the steps of: synthesizing an oligonucleotide primer comprising a nucleotide sequence of at least [one of 60] 30 (preferably at least [one of] 40, most preferably at least [one of 30] 60) contiguous nucleotides derived from a nucleotide sequence selected from the group consisting of SEQ ID NOs:1, 3, 5, 7, 9, 11, 13, 15, 17, and 19, and the complement of such nucleotide sequences; and amplifying a nucleic acid fragment (preferably a cDNA inserted in a cloning vector) using the oligonucleotide primer. The amplified nucleic acid fragment preferably will encode a substantial portion of a potassium channel blocking toxin 15-1, a Bmtx toxin, a neurotoxin P2, a leiurotoxin I, a leiuropeptide I, a leiuropeptide III, a kaliotoxin 1 precursor or a cobatoxin 1.

IN THE CLAIMS:

Claims 1-17 canceled.

Claims 18-31 added.

REMARKS

The specification has been amended to include a claim to the benefit of the parent application. In addition, the specification has been amended to correct typographical errors. Furthermore, claims 1-17 have been canceled and claims 18-31 added. No new matter is added by these amendments.

Entry of the amendments and favorable consideration of the claims are respectfully requested.

Respectfully submitted,

PAUL D. GOLIAN
ATTORNEY FOR APPLICANTS
REGISTRATION NO. 42,591
TELEPHONE: (302) 992-3749
FACSIMILE: (302) 892-1026

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